food TECHNOLOGY

Official Publication of the

Institute of Food Technologists

The Professional Society of Food Technologists

221 North LaSalle Street

Chicago, Illinois 60601 U.S.A.

John B. Klis, *Editor and Director of Publications*

Neil H. Mermelstein, *Associate Editor*

Bernard Schukraft, *Associate Editor*

Gladys N. Anderson, *Assistant Editor*

Anna May Schenck, *Annual Index Editor*

L. J. Janowski, *Contributor: New Food Patents*

Edward H. Hoffman, *Director of Advertising*

Virginia Keller, *Advertising Production*

John S. Lane, *Member Services Manager*

Calvert L. Willey, *Publisher (Executive Director, IFT)*

VOLUME 29

JANUARY-DECEMBER 1975

Copyright © 1975 by Institute of Food Technologists

Printed in U.S.A.

Institute of Food Technologists

The Institute of Food Technologists is a professional society of scientists, engineers, educators, and executives in the field of food technology. Food Technologists are professionals who apply science and engineering to the research, production, processing, packaging, distribution, preparation, evaluation, and utilization of foods. Individuals who are qualified by education, special training or experience are extended an invitation to join in professional association with the select group of the food industry's scientific and technological personnel who are Institute members. Membership is worth many times its modest cost, reflecting positive benefits; stimulation, and opportunities for the individual in his business or profession.

OBJECTIVES

The Institute, as a non-profit, professional, educational society, has several major aims: to stimulate investigations into technological food problems; to present, discuss, and publish the results of such investigations; to raise the educational standards of Food Technologists; and to promote recognition of the scientific approach to food and the basic role of the Food Technologist in industry. All of these activities have the ultimate objective to provide the best possible foods for mankind.

ORGANIZATION AND PROGRESS

Organized July 1, 1939, at Cambridge, Mass., with a membership of less than 100, the Institute has grown to more than 12,500. It is worldwide in scope with almost 2,000 of its membership overseas.

QUALIFICATIONS FOR MEMBERSHIP

Professional Members. Any person who meets the following minimum requirements by training and experience in food technology: (1) Bachelor's degree or higher from a college or university in which he has majored in one or more of the sciences or branches of engineering associated with food technology; (2) Five years of professional experience in food technology, for which a master's degree may be presented as the equivalent of one year's experience; a doctor's degree, the equivalent to three year's experience.

Members. Any person active in any aspect of the food industry and who evidences interest in supporting the objectives of IFT. Recent graduates who are completing their experience requirement for Professional Member status.

Student Members. Any person who is registered as a student in an educational institution and who is actively pursuing candidacy for an Associate Degree or higher in one or more of the sciences or branches of engineering associated with food technology shall be eligible for membership as a Student Member. He may remain a Student Member until the end of the calendar year in which he completes his schooling. At the time he receives his degree, a student may convert automatically to Member without obligation for the higher Member dues until the following year.

Fellows. Any Professional Member who has been active for at least ten years and who has been nominated by the IFT Committee on Fellows for outstanding contributions to the field of food science/technology is eligible to be elected a Fellow of the Institute by the IFT Council.

DUES

Professional Members and Members – $25 a year; includes subscription to *Food Technology* and *IFT World/Directory & Guide*; option to subscribe to the Journal of Food Science at members' special rate of $10. Student Members – $5 a year; includes subscription to one IFT journal, *IFT World/Directory & Guide*, and option to subscribe to the other journal at $5. Emeritus Members – no dues; includes *IFT World/Directory & Guide*; option to subscribe to either or both journals at $5 each.

PUBLICATIONS

The Institute publishes two journals. *Food Technology*, issued monthly, is the official journal of the Institute. The *Journal of Food Science*, issued bimonthly, is devoted to basic and applied research papers on fundamental food components and processes. In addition, an *IFT World/Directory & Guide* is published annually.

REGIONAL SECTIONS

Where 25 or more members live within commuting distance of a given point, a regional section may be established. Presently, there are 43 regional sections.

DIVISIONS

Where 50 or more members of the Institute have a common interest in a particular broad-based discipline of food technology, they may form a division. There are presently 11 divisions serving the areas of Carbohydrates, Food Engineering, Food Packaging, Food Service, Microbiology, Muscle Foods, Nutrition, Quality Assurance, Refrigerated and Frozen Foods, Sensory Evaluation, and Student.

STUDENT CHAPTERS

An IFT Student Chapter certificate may be granted to a group of students enrolled in the food science and technology curriculum in a particular school who have organized to form a student club. There are 25 student chapters.

AFFILIATE ORGANIZATIONS

Affiliate certificates may be granted to food technology organizations outside the U.S.A. There are currently nine chartered affiliate organizations.

ANNUAL MEETINGS

An Annual Meeting of the Institute provides a specially-organized technical program, awards program, and industrial exhibit of equipment, services, processes and ingredients. The program is designed to emphasize current trends and technological developments. Special guest speakers are invited.

AWARDS

The institute presents the following awards, usually annually:

NICHOLAS APPERT AWARD. Purpose of this award (medal furnished by the Chicago Section, and $1,000 by IFT) is to honor a person for pre-eminence in and contributions to Food Technology.

BABCOCK-HART AWARD. Purpose of this award ($1,000 furnished by the Nutrition Foundation and a plaque by IFT) is to honor a person for contributions to Food Technology that have improved public health through some aspects of nutrition or more nutritious food.

IFT INTERNATIONAL AWARD. Purpose of this award (engraved silver salver furnished by Australian Institute of Food Science and Technology and $1,000 by IFT) is to recognize an IFT Member for promoting international exchange of ideas in Food Technology.

IFT FOOD TECHNOLOGY INDUSTRIAL ACHIEVEMENT AWARD. Purpose of this award (plaques to company and individuals) is to recognize and honor the developers of an outstanding new food process and/or product representing a significant advance in the application of Food Technology to food production, successfully applied in actual commercial operation.

WM. V. CRUESS AWARD FOR EXCELLENCE IN TEACHING. Purpose of this award (medal furnished by the Northern California Section and $1,000 by IFT) is to recognize the teacher's role in Food Technology advances.

SAMUEL CATE PRESCOTT AWARD FOR RESEARCH. Purpose of this award ($1,000 and plaque furnished by IFT) is to recognize a research scientist 35 years of age or younger who has demonstrated outstanding ability in Food Science or Technology research.

SCHOLARSHIP/FELLOWSHIP PROGRAM

To attract and encourage the continuation of students in the field of food science and food technology, the Scholarship/Fellowship program is offered to worthy and deserving students, primarily on the basis of scholastic ability.

IFT sponsors 20 $500 awards to sophomores and entering freshmen.

Nineteen Junior/Senior Scholarships and 10 Graduate Fellowships, ranging in amount from $4,000 to $1,000 annually, are sponsored by various food companies and IFT and administered by IFT. Details are available in the booklet, *IFT Administered Fellowship/Scholarship Program – 1976 – 77*, available from IFT's Scholarship Department.

Author Index

Food Technology, Volume 29, 1975

(Month) page number

A

Albrecht, J.J., (10) 61
Allen, W.G., (5) 70
Anderson, R.H., (2) 44
Andon, S.A., (4) 46
Angelotti, R., (11) 60
Armstrong, J., (10) 40
Ayres, J.C., (9) 9

B

Bauernfeind, J.C., (5) 48
Beleau, M.H., (12) 27
Binkerd, E.F., (9) 26, 51
Borgstrom, G., (8) 60
Burroughs, A.L. (6) 30

C

Chichester, C.O., (1) 38
Clark, J.A., (1) 30
Clydesdale, F.M., (2) 18; (4) 18
Cooney, C.L., (2) 33
Corcos, A., (5) 114
Cort, W.M., (11) 46
Culver, B.R., (3) 16
Curtis, C.T., (8) 54

D

Darby, W.J., (1) 38
David, B.D., (12) 46
Dawson, H.G., (5) 70
DiMarco, W.R., (9) 56
Dinesen, N., (5) 40
Doty, T.E., (11) 34
Dunlap, C.E., (12) 62
Dyer, R., (6) 54

E

Ebert, A.G., (1) 9

F

Farkas, D.F., (10) 74
Flannery, R.J., (8) 64
Ford, R.A., (8) 70
Fram, S.R., (11) 52
Francis, F.J., (5) 52
Fruin, J.C., (11) 40

G

Goldblith, S.A., (1) 30
Greenberg, R.A., (10) 12
Grinker, J.A., (8) 76
Grivetti, L.E., (6) 38

H

Halaby, G.A., (3) 42
Hall, R.L., (1) 48; (10) 38
Handler, P., (8) 46
Harley, J.H., (11) 46
Hegarty, P.V.J., (4) 52
Heidelbaugh, N.D., (12) 27
Heldman, D.R., (12) 33
Hyman, P.M., (5) 58

I

IFT Expert Panel & CPI, (3) 67; (10) 117

J

Jansen, J., (6) 54
Jensen, J.D., (6) 60
Jerome, N.W., (6) 46

K

Kamil, H., (5) 64
Kare, M.R., (8) 78
Katzenstein, A.W., (10) 50
Kelly, J.F., (5) 134
Khurana, H.S., (8) 76
Kinsella, J.E., (2) 22; (5) 82
Klis, J., (1) 64
Kraft, P., (7) 48
Krochta, J.M., (7) 28; (10) 74
Kroger, M., (11) 52
Krumel, K.L., (4) 36

L

Labuza, T.P., (5) 9
Larson, N.L., (8) 75
Lech, J.F., (3) 16
Levine, D.W., (2) 33
Lind, K.D., (2) 44
Lyng, R., (8) 56

M

Martin, G.E., (6) 54
Meer, G., (11) 22
Meer, W.A., (11) 22
Mermelstein, N.H., (1) 22; (6) 20
Middlekauff, R.D., (10) 66
Moore, A.B., (7) 42
Morse, R.E., (9) 41
Moyer, J.C., (7) 32

N

National Meat Canners Assoc., Ad hoc committee, (2) 48
Niven, C.F. Jr., (8) 9
Noble, A.C., (12) 56

O

Oser, B.L., (1) 45; (8) 70
Osman, E.M., (4) 30

P

Pangborn, R.M., (6) 34; (8) 75
Pariser, E.R., (1) 23
Patel, R.H., (3) 42
Pedraja, R.R., (3) 38
Perrigo, L.D., (1) 54
Peterson, M.S., (1) 34
Petrowski, G.E., (7) 52
Philip, T., (5) 50
Piontek, E.A., (7) 32
Pradhan, N.K., (3) 16

R

Ranstad, P.E., (10) 58
Rao, M.A., (7) 32
Rhodes, B.B., (5) 134
Ringle, E.C., (12) 46
Ross, K.D., (3) 26
Rucker, M.H., (3) 50
Rumsey, T.R., (10) 74
Russell, G.F., (3) 50

S

Sahn, M., (6) 54
Sarkar, N., (4) 36
Scallet, B.L., (11) 40
Schutz, H.G., (3) 50
Schweigert, B.S., (9) 36
Scott, J.W., (11) 46
Smith, C.A. Jr., (11) 64
Smith, J.D., (11) 64
Snedecor, B., (2) 33
Stauffer, K.R., (4) 46
Sworts, N.H., (10) 54

T

Tillin, S.J., (7) 28
Tinker, J., (11) 22
Toledo, R.T., (5) 102

U

Unger, S.G., (12) 33

V

Van Dyke, D., (12) 27
Vanninen, E., (11) 34
Vinters, J.E., (3) 42
von Elbe, J.H., (5) 42

W

Weissler, A., (5) 38
Whitehand, L.C., (7) 28
Willey, C.L., (1) 16
Wilson, C.S., (6) 42
Wittwer, S.H., (9) 28
Wodica, V.O., (9) 58
Wooster, G.D., (7) 32

Subject Index

Food Technology, Volume 29, 1975

(Month) page number

A

abstracts
FT, (1)4; (2)4; (3)5; (4)4; (5)4; (6)5; (7)4; (8)5; (9)4; (10)4; (11)4; (12)4, 43
international symposium on odor and taste substances, (1)67
JFS, (2)85; (4)110; (5)212; (7)94; (10)125; (11)110
official form for IFT meeting, (9)23
symposium on energy management in the food industry, (12)43
accounting, corporate
R&D costs as amortized assets eliminated, (5)64
additives, food
See **ingredients**
advertising, food
FTC's proposed rule and its implications, (6)30
agar
See **gums**
agglomerating
recent advances in, (6)60
agriculture
defining needs in production and harvesting as guide for future, (10)76
food production: priorities and needed outputs, (9)28
open-ocean farming of kelp, (12)27
alginates
See **gums**
amino acids
and taste, (8)76
amylase
See **enzymes**
amylopectin
See **enzymes**
analyses
AOAC's *Official Methods of Analysis* (book rev), (5)32
determining authenticity of vanilla extracts, (6)54
Microorganisms in Foods, Vol 2. *Sampling for: Principles and Specific Applications* (book rev), (11)98
Natural Poisons (book rev), (7)84
of lipids and fatty acids in foods, chemical, (2)22
of trace metals in foods by nonflame atomic absorption spectroscopy, (3)16
statistical, of electric field distribution in a microwave oven, (12)50
animals
use of in nutritional evaluation of foods, (4)52
anthocyanins
as food colors, (5)52
antioxidant(s)
6-hydroxy-2,5,7,8-tetramethyl-chroman-2-carboxylic acid (Trolox™ C)—properties and applications, (11)46
Appert, Nicholas
note on early life of, (5)114
See also **IFT awards**
apple juice
extraction of with a solid bowl decanter centrifuge, (7)32
Arabic gum
See **gums**
ascorbic acid
content of tomatoes damaged by mechanical harvesting, (7)28
aseptic packaging
See **packaging**
awards
Family Circle's Gold Leaf certificate of merit to IFT's Public Information Program, (9)14
Ralston Purina food science fellowships ($4000 ea) to six IFT student members, (9)16
Scientific Status Summary "Nutrition Labeling" wins award of merit from STC, (8)20
to Food Technology, grand award for advertising display from ASAE, (6)10
to IFT for distinguished technical communication, (1)10
See also **IFT awards**
Ayres, John C.
IFT President-Elect, (7)14

B

Babcock-Hart award
See **IFT awards**
bacteriology
Bergey's Manual of Determinative Bacteriology (book rev), (4)96
consumer attitudes toward yogurt, (11)52
Lactic Acid Bacteria in Beverages and Food (book rev), (11)96
baked goods
energy utilization in bread, cake and related products industries, (12)39
interaction of starch and sugar in cake, (4)32
patents, (1)94; (2)80; (3)108; (4)100; (5)196; (6)99; (8)112; (9)104; (10)107; (11)107; (12)96
role of starch in bread staling, (4)30
use of isomerized corn syrup in, (11)44
beef
See **meat**
beer and brewing materials
patents, (1)97; (2)81; (3)111; (4)105; (5)203; (6)100; (7)91; (8)113; (9)106; (10)110; (11)108; 12(98)
beet sugar processing industry
energy utilization in, (12)36
betalaines
stability as food colors, (5)42
beverages
alcoholic, patents, (1)97; (2)81; (3)111; (4)105; (5)203, (6)100; (7)91; (8)114; (10)110, (11)108; (12)99
carbonated and still: use of isomerized corn syrup in (11)42
Instrumentation in the Food and Beverage Industry (book rev), (5)32
Lactic Acid Bacteria in Beverages and Food (book rev), (11)96
See also specific beverages
biology
Molds, Mushrooms and Mycotoxins (book rev), (8)98
some biological considerations in the nutritional evaluation of foods, (4)52
blacks
US and Caribbean: flavor preferences and food patterns of, (6)46
book reviews
(1)88; (2)18, 75; (3)105; (4)18, 94; (5)32; (6)96; (7)83; (8)98; (9)100; (10)114; (11)96; (12)87
See also **book review index** (12)120
botany
potential for improving the nutrient composition of horticultural crops, (5)134
bread
See **baked goods**
Briskey, E.J.
IFT's new president and winner of 1975 Appert award, (7)9
butter
simulated flavor, (5)82
by-product technology
patents, (2)84; (4)106; (5)209; (6)101; (7)93; (8)115; (9)107; (10)123; (11)109; (12)101

C

cake
See **baked goods**
careers
Careers in Industrial Research and Development (book rev), (4)98
carotenoids
β-carotene, β-apo-8'-carotenal and canthaxanthin as food colors, (5)48
esters in plant products, (5)50
carbohydrates
Nutrients in Processed Foods (book rev), (8)100
technology and uses of debranched enzymes, (5)70
catering
Catering Science and Technology (book rev), (11)103
canning industry
energy conservation in (symposium abs), (12)43
energy utilization in fruit and vegetable processing, (12)36
carbohydrates
See **sugar(s)**
carrageenan
See **gums**
cellulose
nutrients from, (12)62

centrifuge
solid bowl decanter for extraction of apple juice, (7)32
cereal products
patents, (1)94; (2)80; (3)108; (4)100; (5)196; (6)99; (8)112; (9)104; (10)107; (11)107; (12)96
Storage of Cereal Grains and Their Products (book rev), (4)94
cheese
Handbuch der käse. Käse der welt von A–Z. Eine Enzyklopädie. (Handbook of cheese, book rev), (4)98
chemicals
as natural constituents of foods, (3)67
chemistry
Chemistry of Food Packaging (book rev), (6)96
Chemistry of Winemaking (book rev), (8)100
Chemists Companion—A Handbook of Practical Data, Techniques and References (book rev), (10)115
Concise Chemical and Technical Dictionary (book rev), (10)114
Food Chemistry (book rev), (6)96
Handbook of Chemistry and Physics (book rev), (3)105
impact on food science, (1)45
Lehrbuch der Lebensmittel-chemie (book rev), (1)90
Sugar Chemistry (book rev), (10)114
cocoa
patents, (1)96; (2)81; (3)111; (4)104; (5)202; (6)100; (7)90; (8)113; (9)106; (10)110; (11)108; (12)98
coconuts
bases of Southeast Asian flavors, (6)42
coffee
Origin and Use (book rev), (6)96
patents, (1)96; (2)81; (3)111; (4)104; (5)202; (6)100; (7)90; (8)113; (9)106; (10)110; (11)108; (12)98
recent advances in instantizing, (6)64
color(s)
anthocyanins as food, (5)52
carotenoid esters in plant products, (5)50
carotenoids as food, (5)48
FDA regulations of food, (5)38
instrumental analysis of sensory properties of food, (12)56
patents, (1)97; (2)82; (4)105; (5)203; (6)100; (7)91; (8)114; (9)106; (10)110; (11)108; (12)99
stability of betalaines as food, (5)42
toxicology and regulations of natural, (5)40
See also **ingredients**
computer/calculator
programmable for thermal process evaluation, (3)42
condiments
use of isomerized corn syrup in preparation of, (11)44
confectionery
patents, (1)96; (2)81; (3)110; (4)104; (5)199; (6)100; (7)89; (8)112; (9)105; (10)108; (11)107; (12)97
use of isomerized corn syrup in, (11)42
consumerism
congressional bills support consumer demands, (10)66
consumer attitudes toward yogurt, (11)52
consumer concerns regarding food labeling and packaging, (10)54
Consumer Sourcebook (book rev), (1)91
cost of government regulations to food industry, (10)61
improving consumer confidence and satisfaction, (10)40
meeting consumer concerns at acceptable costs, (10)58
symposium: consumer concerns affecting food science, (10)38
understand consumers to keep them happy, (10)50
containers
chemical sterilants for aseptic packaging, (5)102
field performance of metal food cans with easy-open ends, (2)48
corrosion
role of plant/equipment design in prevention of, (1)54
Cruess, Wm. V. award
See **IFT awards**
culture
cross-cultural aspects of flavor preferences, (6)34
flavor preferences and food patterns of selected U.S. and Caribbean blacks, (6)46
importance of flavors in the Middle East, (6)38
rice, fish and coconuts—the bases of Southeast Asian flavors, (6)42
symposium: flavor and culture, (6)34

D

dairy products
patents, (2)80; (3)108; (4)100; (5)196; (6)99; (7)88; (8)111; (9)102; (10)106; (11)104; (12)96
recent advances in agglomerating, instantizing and spray drying, (6)60
developing countries
cross-cultural aspects of flavor preferences, (6)34
flavor preferences and food patterns of selected U.S. and Caribbean blacks, (6)46
food availability vs future needs, (8)46
IFT to administer $100,000 AID grant to Latin America, (9)64
importance of flavors in the Middle East, (6)38
rice, fish and coconuts—bases of Southeast Asian flavors, (6)42
symposium: flavor and culture, (6)34
dictionaries
Concise Chemical and Technical (book rev), (10)114
diet
cross-cultural aspects of flavor preferences, (6)34
flavor preferences and food patterns of selected U.S. and Caribbean blacks, (6)46
importance of flavors in the Middle East, (6)38
improving consumer confidence and satisfaction, (10)40
naturally occurring toxicants in foods for human consumption, (3)67
rice, fish, and coconuts—the bases of Southeast Asian flavors, (6)42
some biological considerations in nutritional evaluation of foods, (4)52
symposium: consumer concerns affecting food science, (10)38
understand consumers to keep them happy, (10)50
Why Your Child is Hyperactive (book rev), (7)85
dietetics
World Review of Nutrition and Dietetics (book rev) Vol 20, (8)98; Vol 21, (12)87

E

education
food safety—IFT 1975 short course program, (3)14
food science programs: recruitment of students, (7)42
IFT administered fellowship/scholarship program—1964 to date, (7)48
IFT fellowship/scholarship recipients, (10)26
IFT's food safety short course reoffered in New York and California, (10)32
IFT Quality Assurance Div. food processing course program, (9)86
news notes, (1)92; (3)96; (5)184; (7)18; (8)93; (10)22; (11)16; (12)12
recruitment of students for food science programs, (7)42
See also **forums in focus; meetings and conferences; short courses and workshops; symposia**
egg products
patents, (1)93; (2)80; (3)108; (4)100; (5)195; (6)99; (7)88; (8)111; (9)102; (10)106; (11)104; (12)95
electric field distribution
measuring in a microwave oven, (12)46
emulsifiers, food grade
data on 191 organized from user's point of view, (7)52
energy
and engineering trade-offs in tomorrow's food plant (symposium abs), (12)43
conservation in food canning processes (symposium abs), (12)43
energy utilization in the leading energy-consuming food processing industries, (12)33
impact of crisis on food packaging (symposium abs), (12)43
saving in food and effluent evaporation processes (symposium abs), (12)43
symposium: energy management in the food industry, (12)33
engineering
See **food engineering; food processing; food science & technology**

enzymes
debranched: technology and uses of, (5)70
Enzymes in Food Processing (book rev), (11)96
Food Related Enzymes (book rev), (5)37
immobilized, to produce high-fructose corn syrup, (6)20
equipment
patents, (2)83; (4)106; (6)100; (7)93; (8)114; (9)107; (10)122; (11)109; (12)100
role of design in reducing corrosion, (1)54
errata notices and letters
(1)92; (2)68, 70; (5)20; (7)75; (9)82; (11)21
evaporators
energy saving in food and effluent evaporation processes (symposium abs), (12)43
extraction
of apple juice with a solid bowl decanter centrifuge, (7)32
extracts, vanilla
determining authenticity of, (6)54

F

fats
Dietary Fats and Thrombosis (book rev), (4)96
Nutrients in Processed Foods (book rev), (8)100
retention in cooked beef and TP-extended patties, (2)44
fatty acids
and lipids in foods: need for quantitative data, (2)22
effect on food flavor, (5)82
FDA
criminal prosecution of individuals under the federal FD&C Act, (5)58
regulation of food colors, (5)38
symposium: impact of FDA regulations on quality assurance, (11)60
toxicology and regulations of natural colors, (5)40
See also **regulations; Washington news notes**
FD&C Act
criminal prosecution of individuals under the federal, (5)58
See also **regulations; Washington news notes**
feeds
patents, (2)84; (4)106; (5)209; (6)101; (7)93; (8)115; (9)107; (10)123; (11)109; (12)101
feedstuffs
open-ocean farming of kelp, (12)27
potential for improving nutrient composition of, (5)134
status of world trade, (8)60
fellows, IFT
See **IFT**
fish
bases of Southeast Asian flavors, (6)42
patents, (1)93; (2)80; (3)107; (4)99; (5)194; (6)99; (7)87; (8)111; (9)102; (10)106; (11)104; (12)95
quality assurance program at Booth Fisheries, (3)38
flavor
amino acids and taste, (8)76
changes in taste with age—infancy to senescence, (8)78
cross-cultural aspects of preferences, (6)34
crystalline fructose: expected increase as food ingredient, (11)34
effect of lipids and fatty acids, and interaction of flavor molecules in butter, (5)82
GRAS substances: progress under Food Additive Amendment, (8)70
importance of flavors in the Middle East, (6)38
instrumental analysis of sensory properties of, (12)56
isomerized corn syrup in food products, (11)40
new products and technical sales literature, (1)72
patents, (1)97; (2)82; (4)105; (5)203; (6)100; (7)91; (8)114; (9)106; (10)110; (11)108; (12)99
preferences and food patterns of selected U.S. and Caribbean blacks, (6)46
rice, fish and coconuts—bases of Southeast Asian flavors, (6)42
simulated butter, (5)82
symposium: chemical senses and nutrition, (8)75; flavor and culture, (6)34
taste and odor substances: international symposium abstracts, (1)67
taste factors and obesity, (8)76
flow properties
See **rheology**
food engineering
energy trade-offs in tomorrow's food plant (symposium abs), (12)43
energy utilization in leading energy-consuming food processing industries, (12)33
Food Process Engineering (book rev), (10)115
symposium: energy management in the food industry, (12)33
food industry
news, (1)78; (3)88; (4)82; (5)24; (6)12; (7)76; (9)88; (10)98; (11)86; (12)78
symposium: energy management in, (12)33
See also specific subject headings
food processing
and nutrition—priorities and needed outputs, (9)36
Commercial Fruit Processing (book rev), (11)100
defining R&D needs as guide for future, (10)78
energy and engineering trade-offs in tomorrow's food plant, (12)43
energy saving in effluent evaporation processes (symposium abs), (12)43
energy utilization in leading energy-consuming industries, (12)33
Enzymes in Food Processing (book rev), (11)96
evaluation of by programmable computer/calculator, (3)42
extraction of apple juice with a solid bowl decanter centrifuge, (7)32
Food Process Engineering (book rev), (10)115
IFT to administer AID grant to Latin America, (9)64
recent advances in agglomerating, instantizing and spray drying, (6)60
Storage, Processing and Nutritional Quality of Fruits and Vegetables (book rev), (11)98
symposium: energy management in the food industry, (12)33
food production
IFT to administer AID grant to Latin America, (9)64
priorities and needed outputs, (9)28
food research
See **food science & technology; research & development**
food safety
anthocyanins as food colors, (5)52
carotenoids as food colors, (5)48
carotenoid esters in plant products, (5)50
chemical sterilants for aseptic packaging, (5)102
Comparative Studies of Food and Environmental Contamination (book rev), (7)84
congressional bills support consumer demands, (10)66
consumer concerns regarding labeling and packaging, (10)54
cost of government regulations to the food industry, (10)61
criminal prosecution of individuals under the federal FD&C Act, (5)58
Eating May Be Hazardous to Your Health (book rev), (2)18
FDA regulations of food colors, (5)38
FDA regulations promote quality assurance, (11)60
field performance of metal food cans with easy-open ends, (2)48
GRAS—concept and applications, (1)48
IFT 1975 short course (program), (3)14
IFT's short course reoffered in New York and California, (10)32
impact of analytical chemistry on food science, (1)45
improving consumer confidence and satisfaction, (10)40
industry participation in GRAS review (1)9
meeting consumer concerns at acceptable cost, (10)58
naturally occurring toxicants in foods (scientific status summary), (3)67
quality assurance system meets FDA regulations, (11)64
stability of betalaines as food colors, (5)42
symposium: consumer concerns affecting food science, (10)38; impact of FDA regulations on quality assurance, (11)60
toxicology and regulation of natural colors, (5)40
understand consumer to keep him happy, (10)50
food science & technology
changing roles of federal government research groups, (9)58
changing roles of industry research groups, (9)51

changing roles of university research groups, (9)56
consumer concerns regarding food labeling and packaging, (10)54
cost of government regulations to the food industry, (10)61
defining R&D needs as guide for future, (10)74
Experimental Sensory Psychology (book rev), (11)96
history: food logistics in perspective, (1)34; foods in Ancient Egypt and Classical Greece, (1)23; GRAS—concept and applications, (1)48; impact of analytical chemistry on, (1)45; introduction to symposium, (1)22; processing of food in Ancient Rome, (1)30; relationship between nutrition and, (1)38
improving consumer confidence and satisfaction, (10)40
meeting consumer concerns at acceptable cost, (10)58
Molds, Mushrooms and Mycotoxins (book rev), (8)98
PAG Compendium—collected papers issued by protein-calorie advisory group of UN system, 1956–1973, 9 volumes (book rev), (7)84
recruitment of students for educational programs, (7)42
research inputs—present and future, (9)41
symposium: consumer concerns affecting, (10)38; history of, (1)22; what's ahead in food research, (9)28
technology and uses of debranching enzymes, (5)70
understand consumers to keep them happy, (10)50

food service
Catering Science and Technology (book rev), (11)103
Food Service Facilities Planning (book rev), (12)88
Food Service Trends (book rev), (1)88
measuring electric field distribution in a microwave oven, (12)46
Quantity Food Purchasing (book rev), (12)90

food technologists
criminal prosecution of individuals under the federal FD&C Act, (5)58
recruitment of students for educational programs, (7)42
See also **IFT**

food(s)
See specific headings

foodstuffs, oil-based
patents, (1)95; (3)110; (4)104; (5)198; (6)99; (7)89; (8)112; (9)105; (10)108; (11)107; (12)97

forums in focus
(3)84; (6)16; (7)74; (8)94; (9)86; (10)36; (12)21
See also: **meetings and conferences; short courses and workshops; symposia**

freeze drying
Freeze Drying of Biological Materials (book rev), (1)90

fructose, crystalline
physical, chemical, organoleptic properties; metabolism; carciogenicity; and uses as food ingredient, (11)34

fruit(s)
Commercial Fruit Processing (book rev), (11)100
Cooling and Ripening of Fruits in Relation to Quality (book rev), (2)76
Postharvest Physiology, Handling and Utilization of Tropical and subtropical (book rev), (11)101
Storage, Processing and Nutritional Quality of (book rev), (11)98
See also **food(s)** and specific headings

fruit drinks
patents, (1)97; (5)203; (7)91; (8)113; (9)106; (10)110; (11)108

fruit products
patents, (1)96; (2)81; (3)110; (4)104; (5)200; (6)99; (7)90; (8)113; (9)106; (10)108; (11)107; (12)98

FTC
proposed food advertising rule, (6)30

furcelleran
See **gums**

G

glucose
See **sugar**

glycogen
See **enzymes**

ghatti gum
See **gums**

GMP regulations
See **regulations**

government, federal
changing roles of research groups, (9)58
research inputs—present and future, (9)41
See also **regulations; Washington news notes**

GRAS
concept and applications, (1)48
food industry participation in review, (1)9
recent progress in flavoring ingredients under Food Additives Amendment, (8)70

guar
See **gums**

gums
comparison of functional properties of two grades of gum tragacanth, (4)46
flow properties of in food products, (4)36
water soluble: classification, function and applications in foods, (11)22
water soluble: past, present and future, (11)22

H

harvesting, mechanical
ascorbic acid content of tomatoes damaged by, (7)28

health
Eating May Be Hazardous to Your Health (book rev), (2)18
naturally occurring toxicants in foods, (3)67
See also **diet; nutrition**

horticulture
potential for improving nutrient composition of crops, (5)134

hydrocolloids
flow properties of, used in food products, (4)36

hydroponics
open-ocean farming of kelp, (12)27

hyperactivity
Why Your Child is Hyperactive (book rev), (7)85

I

IFT
administers $100,000 AID grant to Latin America, (9)64
annual meeting: call for symposia, committee and division programs, (8)23; (9)20; call for volunteered papers and abstract form, (9)21; 1975 photo highlights, (8)28; program chairman's report, (5)9
awards: Nicholas Appert to E.J. Briskey, (7)9; Babcock-Hart to D.K. Tressler, (7)10; call for nominations, (8)110, (9)108, (10)124; Wm. V. Cruess to C.M. Stine, (7)13; industrial achievement to Clinton Corn Processing Co., (6)20; international to G.A. Borgstrom, (7)11; S.C. Prescott to A.J. Sinskey, (7)12
Ayres, J.C., President-elect, (7)14
Briskey, E.J., President, (7)9
committee on public information—members, (1)18
council meeting (June 8) highlights, (10)9
employment bureau: employer/employee forms, (4)16
executive committee meeting (June 7) highlights, (10)9
executive committee meeting (Oct. 1974) highlights, (2)14
executive committee: new members, (6)9
exhibitors at 35th annual meeting, (5)142
expert panel on food safety and nutrition: members, (1)18; wins award of merit from STC, (8)20
fellows: 17 named at 35th annual meeting, (8)13
fellowship/scholarship program, 1975–1976: call for applications, (1)14; details explained, (11)18
fellowship/scholarship program, 1964 to date, (7)48
fellowship/scholarship recipients 1975–1976, (10)26
financial summary, 1975, (10)12
food expo—exhibitors at 35th annual meeting, (5)142
food safety short course: program, (3)14; reoffered in New York and California, (9)18; (10)32
Food Technology receives ASAE grand award, (6)10
membership notice re professional/emeritus status, (6)10; (8)15; (11)9; (12)101
president: E.J. Briskey, (7)9
president-elect: J.C. Ayres, (7)14
president's report-1975, (8)9
program details 35th annual meeting, (5)115
programs for 1976 annual meeting—call for committee and division, (8)23; (9)20
public information program explained, (1)16

publications win awards, (1)10
Quality Assurance Division food processing course program, (9)86
regional communicators meet the press, (1)19
regional section news: (1)12; (2)12; (3)12; (4)13; (5)18; (6)9; (7)16; (8)26; (9)16; (10)20; (11)9; (12)9
role: what should it be? (9)9
scientific status summaries, (3)67; (10)117; reports released and in preparation, (1)18; report on nutrition labeling wins STC award, (8)20
state of the Institute—1975, (8)9
Student Division: call for undergraduate research papers, (12)9; news, (1)9; (3)96; (7)42; (9)16; report on recruitment of students for food science programs, (7)42; sponsors successful conference on world food needs, (8)94; to sponsor undergraduate research forum at annual meeting, (3)96
symposia: call for proposals for 1976 annual meeting, (8)23; (9)20
what should role of, be, (9)9
world: (1)10; (2)9; (3)9; (4)9; (5)14; (6)9; (7)9; (8)13; (9)13; (10)9; (11)9; (12)9

IMF (intermediate moisture foods)
mathematical estimation of water activity in, (3)26

industrial achievement award
See **IFT awards**

ingredients
anthocyanins as food colors, (5)52
butter flavor, simulated, (5)82
carotenoid esters in plant products, (5)50
carotenoids as food colors, (5)48
crystalline fructose; use in food expected to increase, (11)34
determining the authenticity of vanilla extracts, (6)54
Eating May Be Hazardous to Your Health (book rev), (2)18
evaluation of natural food hazards, (3)67
FDA regulation of food colors, (5)38
flow properties of gums used in food products, (4)36
food additives patents: (1)97; (2)82; (3)112; (4)105; (5)210; (7)92; (8)114; (9)106; (10)123; (12)99
Food Additives to Extend Shelf Life (book rev), (2)76
food-grade emulsifiers, a survey of 191, (7)52
GRAS—concept and applications, (1)48
GRAS substances: progress under Food Additives Amendment, (8)70
immobilized enzymes produce high-fructose corn syrup, (6)20
importance of flavors in the Middle East, (6)38
industry participates in GRAS review, (1)9
interaction of starch with other components of food systems, (4)32
isomerized corn syrups in food products, (11)40
new products and technical sales literature, (1)72; (2)54; (3)76; (4)68; (5)170; (6)80; (7)68; (8)82; (9)82; (10)94; (11)72; (12)71
rice, fish and coconuts—the bases of Southeast Asian flavors, (6)42
role of natural and synthetic sweeteners in human nutrition, (8)75
stability of betalaines as food colors, (5)42
Sugar and Sugar Replacements (book rev), (9)100
Sugars in Human Nutrition (book rev), (9)100
sulfites as food additives—scientific status summary, (10)117
technology and uses of debranching enzymes, (5)70
toxicology and regulations of natural colors, (5)40
water-soluble gums: past, present and future, (11)22

instantizing
recent advances in, (6)60

institutional feeding
See **food service**

instrumental analysis
of sensory properties of foods, (12)56
See also **analyses; methods**

instrumentation
Instrumentation in the Food and Beverage Industry (book rev), (5)32

international award
See **IFT awards**

irradiation
Improvement of Food Quality by Irradiation (book rev), (7)83

isoamylase
See **enzymes**

IUoFST
international luncheon and symposium, (5)16
report on 4th international congress Madrid (1974), (1)64

J

juice
extraction of apple with a solid bowl decanter centrifuge, (7)32
Technology of Fruit Juice Concentrate—Chemical Composition of Fruit Juices (book rev), (3)105

K

karaya gum
See **gums**

kelp
open-ocean farming of, (12)27

L

labeling
congressional bills support consumer demands, (10)66
consumer concerns regarding food, (11)54
need for quantitative data on lipids and fatty acids in foods, (2)22
See also **regulations; Washington news notes**

laboratory
new products and technical sales literature, (1)76; (2)60; (3)78; (4)70; (5)174; (6)82; (7)71; (8)86; (9)76; (10)91; (11)78; (12)72

lactones
importance in flavor of dairy foods, (5)88

laws
See **regulations; Washington news notes**

letters
(2)68; (3)86; (4)28; (5)20; (6)18; (7)75; (8)96; (10)36; (11)21; (12)16

levulose
See **ingredients**

lipids
and fatty acids in foods: need for quantitative data, (2)22

literature, technical sales
See **book reviews; flavors; ingredients; laboratory; packaging; plant; pollution control**

locust bean gum
See **gums**

M

management
energy utilization in the leading energy-consuming food processing industries, (12)33
organization and functions of Booth Fisheries quality assurance program, (3)38
symposium: energy management in the food industry, (12)33

marketing
understand consumers to keep them happy, (10)50

mathematics
estimation of water activity in IMF, (3)26
thermal process evaluation by programmable computer calculator, (3)42

measurement
instrumental analysis of sensory properties of food, (12)56
Metric Measurement of Foods (book rev), (10)114
of electric field distribution in a microwave oven, (12)46

meat and meat products
Aspects of Meat Inspection (book rev), (6)97
Freezing—Why and How? (book rev), (6)98
patents, (1)93; (2)80; (3)107; (4)99; (5)194; (6)99; (7)87; (8)111; (9)102; (10)106; (11)104; (12)95
Proceedings of the International Symposium on Nitrite in Meat Products (book rev), (1)88
retention of water and fat in beef patties extended with TP, (2)44
Textbook of Meat Hygiene (book rev), (6)96
The Meat We Eat (book rev), (6)98

meat packing industry
energy utilization in, (12)36

meetings and conferences
coming events, (1)86; (2)73; (3)100; (4)90; (5)190; (6)90; (7)78; (8)108; (9)94; (10)104; (11)94; (12)82
fourth international congress of food science & technology—report on, (1)64
international on odor and taste substances: abstracts of papers, (1)67

programs for, (1)81; (3)84; (5)16; (9)86; (10)37; (12)24
reports on, (1)64, 67
See also **forums in focus; short courses and workshops; symposia**

metals, trace
analysis of foods by nonflame atomic absorption spectroscopy, (3)16

methanol
production of SCP from, (2)33

methods
analytical determination of vanilla extract's authenticity, (6)54
AOAC's *Official Methods of Analysis* (book rev), (5)32
mathematical estimation of water activity in IMF, (3)26
nonflame atomic absorption spectroscopy for trace metal analysis of foods, (3)16
See also **analyses**

microbiology
chemical sterilants for aseptic packaging, (5)102
field performance of metal food cans with easy-open ends: evaluation for organisms associated with foodborne illnesses, (2)48
Handbook of Microbiology: Vol 1, *Organismic Microbiology;* Vol 2, *Microbial Composition;* Vol 3, *Microbial Products;* Vol 4, *Microbial Metabolism, Genetics and Immunology* (book rev), (2)77
Microorganisms in Foods: Vol 2, *Sampling for Microbiological Analysis: Principles and Specific Applications* (book rev), (11)98
Mikrobiologie pflanzlicher lebensmittel. (Microbiology of plant foods) (book rev), (6)103
production of SCP from methanol, (2)33
quality standards and FDA regulations, (11)62

micronutrients
See **nutrition**

microwave ovens
measuring electric field distribution in, (12)46

military feeding
food logistics in historical perspective, (1)34

milk powder, whole
recent advances in instantizing, agglomerating and spray drying, (6)62

minerals
Nutrients in Processed Foods. Vol 1, *Vitamins and Minerals* (book rev), (2)75
potential for improving composition of horticultural crops, (5)134

molds
See **biology**

mushrooms
See **biology**

mycotoxins
See **biology**

N

new products
consumer, (1)71; (2)52; (3)73; (4)66; (5)168; (6)72; (8)80; (9)70; (10)86; (11)70; (12)68
development costs and trends, (9)26
defining R&D needs as guide for future, (10)83
industrial. See **flavors; ingredients; laboratory; packaging; plants; pollution control**

nitrites
Proceedings of the International Symposium on Nitrite in Meat Products (book rev), (1)88

nutrients
See **nutrition**

nutrition
amino acids and taste, (8)76
ascorbic acid content of tomatoes damaged by mechanical harvesting, (7)28
biological considerations in evaluation of foods, (4)52
congressional bills support consumer demands, (10)66
consumer concerns regarding food labeling and packaging, (10)54
cost of government regulations to food industry, (10)61
food and food-use classification systems, (3)50
food processing and: priorities and needed outputs, (9)36
food production: priorities and needed outputs, (9)28
historical relationship between food science and, (1)38
historical role of analytical chemistry in, (1)45
improving consumer confidence and satisfaction, (10)40
meeting consumer concerns at acceptable cost, (10)58
Modern Problems in Pediatrics. Vol 14. *Nutrition, Growth and Development* (book rev), (7)86
Morinda: An Economic Analysis of Malnutrition Among Young Children in Rural India (book rev), (5)206
need for quantitative data for labeling, (2)22
news notes, (2)28
nutrients from cellulose, (12)62
Nutrients in Processed Foods (book rev) Vol 1, *Vitamins and Minerals,* (2)75; Vol 2, *Proteins,* (8)98; Vol 3, *Fats and Carbohydrates,* (8)100
Nutrition for the Growing Years (book rev), (12)87
open-ocean farming of kelp, (12)27
PAG Compendium—Collected papers issued by the protein-calorie advisory group of the UN system, 1956–1973 (book rev), (7)84
potential for improving nutrient composition of horticultural crops, (5)134
Proceedings of 9th International Congress of Nutrition, Mexico, 1972 (4 volumes, book rev), (12)88
production of SCP from methanol, (2)33
research inputs—present and future, (9)41
role of natural and synthetic sweeteners in human, (8)75
Storage, Processing and Nutritive Quality of Fruits and Vegetables (book rev), (11)98
Sugars in Human Nutrition (book rev), (9)100
symposium: chemical senses and, (8)75
symposium: consumer concerns affecting food science, (10)38
taste factors and obesity, (8)76
Vitamin C (book rev), (5)206
Why Your Child is Hyperactive (book rev), (7)85
World Review of Nutrition and Dietetics (book rev), (8)98; (12)87

O

obesity
taste factors and, (8)76

obituaries
(2)72; (3)9, 103; (4)88; (5)188; (6)89; (7)82; (8)107; (9)92; (10)103

odor
and taste substances: international symposium abstracts, (1)67

oils
patients, (1)95; (3)110

oilseed products
patents, (2)80; (3)110; (4)100; (5)197; (6)99; (7)89; (8)112; (9)104; (10)108; (11)107; (12)97

P

packaging
chemical sterilants for aseptic, (5)102
Chemistry of Food Packaging (book rev), (6)96
consumer concerns regarding food, (10)54
defining R&D needs as guide for future, (10)82
field performance of metal food cans with easy-open ends, (2)48
food: impact of energy crisis on plastic (symposium abs), (12)43
In Perspective (book rev), (2)75
new products and technical sales literature, (1)74; (2)58; (3)80; (4)80; (5)172; (6)81; (7)72; (8)89; (9)72, 84; (10)88; (11)83; (12)74
patents, (2)84; (5)209; (6)102; (8)115; (9)106; (10)123; (11)109; (12)101

patents
miscellaneous products, (1)97; (2)82; (3)112; (4)105; (5)210; (6)100; (7)92; (8)114; (9)107; (10)110; (11)108; (12)99
See also **alcoholic beverages; baked goods; beer and brewing materials; by-product technology; cereal products; cocoa; coffee; color; confectionery; dairy products; egg products; equipment and processes; feeds; fish products; flavor; fruit(s); ingredients; meat; oils; oil-based foodstuffs; oilseed products; packaging; poultry; soft drinks and fruit drinks; starches; sugars; tea; vegetables**

pediatrics
Modern Problems in. Vol 14, *Nutrition, Growth and Development* (book rev), (7)86

people: transfers, promotions
(1)84; (2)71; (3)103; (4)86; (5)186; (6)88; (7)81; (8)106; (9)90; (10)102; (11)92; (12)80

PER (protein efficiency ratio)
and nutritional evaluation of foods, (4)56
physics
Handbook of Chemistry and Physics (book rev), (3)105
pigments, plant
carotenoid esters in plant products, (5)50
carotenoids as food colors, (5)48
stability of betalaines as food colors, (5)42
symposium: utilization of, (5)38
toxicology and regulation of natural colors, (5)40
See also **color; ingredients**
plants
new products and technical sales literature, (1)74; (2)56; (3)82; (4)74; (5)180; (6)85; (7)70; (8)90; (9)80; (10)88; (11)74; (12)76
pollution control
Comparative Studies of Food and Environmental Contamination (book rev), (7)84
Guide to Water Cleanup Materials and Methods (book rev), (1)88
new products and technical sales literature, (1)76; (2)60; (3)83; (4)72; (5)182; (6)86; (7)20, 23; (8)92; (9)79; (10)94; (11)84; (12)77
news notes, (7)20
population
food availability vs future needs, (8)46
government policy and the world food supply, (8)54
nonagricultural sources of food, (8)64
status of world food trade, (8)60
U.S. role in the world food supply, (8)56
poultry
patents, (1)93; (2)80; (3)108; (4)100; (5)195; (6)99; (7)88; (8)111; (9)102; (10)106; (11)104; (12)95
Prescott, S.C. award
See **IFT awards**
processes
patents, (2)83; (4)106; (6)100; (7)93; (8)114; (9)107; (10)122; (11)109; (12)100
processing
See **food processing**
protein
interaction of starch and, in milk, (4)35
nonagricultural sources of food, SCP, (8)64
Nutrients in Processed Foods (book rev), (8)98
potential for improving vegetable, (5)134
production of single-cell from cellulose, (12)62
production of single-cell from methanol, (2)33
retention of water and fat in cooked beef patties extended with textured vegetable, (2)44
psychology
Experimental Sensory Psychology (book rev), (11)96
public information program
See **IFT**
pullulanase
See **enzymes**
purchasing
Quantity Food Purchasing (book rev), (12)90

Q

quality assurance
details of program at Booth Fisheries, (3)38
FDA regulations promote, (11)60
symposium: impact of FDA regulations on, (11)60
system meets FDA regulations, (11)64
Tomato Products, Processing and Quality Evaluation (book rev), (5)32

R

regulations
and toxicology of natural colors, (5)40
carotenoids as food colors, (5)48
Cases and Materials on Food and Drug Law (book rev), (1)90
congressional bills support consumer demands, (10)66
cost of government to food industry, (10)61
criminal prosecution of individuals under the federal FD&C Act, (5)58
FDA of food colors, (5)38
FDA, promote quality assurance, (11)60
food-grade emulsifiers, a survey, (7)52
food industry part in GRAS review, (1)9
FTC's proposed food advertising rule, (6)30
GMP, (11)60, 66
government policy and world food supply, (8)54
GRAS—concept and applications, (1)48
GRAS substances: progress under Food Additives Amendment, (8)70
quality assurance system meets FDA, (11)64
R&D costs as amortized assets eliminated by Financial Accounting Standards Board, (5)64
symposia: consumer concerns affecting food science, (10)61; impact of FDA regulations on quality assurance, (11)60
See also **Washington news notes**
research & development
Careers in Industrial R&D (book rev), (4)98
changing roles of federal government research groups, (9)58
changing roles of industrial research groups, (9)51
changing roles of university research groups, (9)56
costs as amortized assets eliminated, (5)64
food: defining needs as guide for future, (10)74
food processing and nutrition—priorities and needed outputs, (9)36
IFT to administer $100,000 AID grant to Latin America, (9)64
National Patterns of Resources: Funds and Manpower in U.S., 1953–75 (book rev), (11)98
new product development trends, (9)26
priorities and needed outputs in food production, (9)28
research inputs—present and future, (9)41
symposium: what's ahead in food research, (9)28
rheology
flow properties of gums useful to the food industry, (4)36
Lebensmittel-einfluss der rheologie (Food Role of Rheology) (book rev), (4)98
of solutions: physical properties of hydrocolloids modifying flow behavior, (4)36
rice
bases of Southeast Asian flavors, (6)42

S

salts, sodium
interaction of starch in food systems, (4)34
sanitation
design of plant/equipment to reduce corrosion correlated with, (1)54
See also **pollution control**
scientific status summary
naturally occurring toxicants in foods, (3)67
released by IFT and in preparation, (1)18
sulfites as food additives, (10)117
seafood
quality assurance program at Booth Fisheries, (3)38
seaweed extracts
See **gums**
sensory evaluation
amino acids and taste, (8)76
butter flavor, simulation of, (5)82
changes in taste with age—infancy to senescence, (8)78
Experimental Sensory Psychology (book rev), (11)96
instrumental analysis of foods, (12)56
of Appearance of Materials (book rev), (3)105
role of natural and synthetic sweeteners in human nutrition, (8)75
symposium: chemical senses and nutrition, (8)75
taste factors and obesity, (8)76
See also **flavor(s); odor**
short courses and workshops
(1)87; (2)74; (3)14, 101; (4)92; (5)192; (6)94; (7)80; (8)109; (9)96; (10)32, 36, 105; (11)95; (12)84
See also **forums in focus; meetings and conferences; symposia**
single-cell protein
See **protein**
societies and associations
Encyclopedia of Associations. Vol 1, *National Organization of U.S.;* Vol 2, *Geographic and Executive Index;* Vol 3, *New Associations and Projects* (book rev), (10)116
news (other than IFT), (1)85; (2)72; (3)103; (4)88; (5)188;

(6)89; (7)82; (8)107; (9)91; (10)102; (11)93; (12)81
See also **IFT**
soft drinks
patents, (1)97; (5)203); (7)91; (8)113; (9)106; (10)110; (11)108
spectroscopy
nonflame atomic absorption: trace metal analysis of foods, (3)16
See also **analyses; methods**
spray drying
recent advances in, (6)60
starch
interaction with other food system components, (4)30
patents, (1)96; (2)81; (3)110; (4)104; (5)199; (6)100; (7)89; (8)112; (9)105; (10)108; (11)107; (12)97
technology and uses of debranching enzymes, (5)70
statistical analysis
of electric field distribution in a microwave oven, (12)50
sterilants, chemical
gaseous and liquid for aseptic packaging of foods, (5)102
sterilization
of food: alternatives to heat, (5)102
See also **food processing; packaging**
storage
Current Trends in the Refrigerated Storage and Transport of Perishable Foodstuffs (book rev), (4)96
Processing and Nutritional Quality of Fruits and Vegetables (book rev), (11)98
Storage of Cereal Grains and Their Products (book rev), (4)94
sugar
crystalline fructose: use as food ingredient, (11)34
glucose production from cellulose, (12)62
patents, (1)96; (2)81; (3)110; (4)104; (5)199; (6)100; (7)89; (8)112; (9)105; (10)108; (11)107; (12)97
Sugar Cane (book rev), (5)32
Sugar Chemistry (book rev), (10)114
Sugar and Sugar Replacement (book rev), (9)100
Sugars in Human Nutrition (book rev), (9)100
This is Liquid Sugar (and supp) (book rev), (4)94
See also **ingredients**
sulfites
as food additives—scientific status summary, (10)117
surfactants
interaction with starch in food systems, (4)32
sweeteners
crystalline fructose: use as food ingredient, (11)34
isomerized corn syrup in food products, (11)40
See also **ingredients; sugar(s)**
symposia, IFT
chemical senses and nutrition, (8)75
consumer concerns affecting food science, (10)38
energy management in the food industry, (12)33
flavor and culture, (6)34
history of food science & technology, (1)22
impact of FDA regulations on quality assurance, (11)60
utilization of plant pigments, (5)38
what's ahead in food research, (9)28
world food supply, (8)54
symposia proceedings
international on *Dietary Fats and Thrombosis* (book rev), (4)96
Lactic Acid Bacteria in Foods, (11)96
Meat Freezing—Why and How? (book rev), (6)98
international on *Nitrite in Meat Products* (book rev), (1)88
nuclear techniques in *Comparative Studies of Food and Environmental Contamination* (book rev), (7)84
Nutrients in Processed Foods. Vol 1, *Vitamins and Minerals* (book rev), (2)75
Sensory Evaluation of Appearance of Materials (book rev), (3)105
Sugar and Sugar Replacements (book rev), (9)100
Technology of Fruit Juice Concentrates—Chemical Composition of Fruit Juices (book rev), (3)105
syrup, corn
immobilized enzymes produce high fructose, (6)20
isomerized, in food products, (11)40
systems analysis
defining R&D needs as guide to future, (10)83
systems, classification
for foods—by patterns, use and consumer generated, (3)52

T

tamarinds
See **gums**
taste
See **flavors; sensory evaluation**
tea
patents, (1)96; (2)81; (3)111; (4)104; (5)202; (6)100; (7)90; (8)113; (9)106; (10)110; (11)108; (12)98
texture
instrumental analysis of sensory properties of foods, (12)56
See also **sensory evaluation**
textured vegetable protein
See **proteins**
thrombosis
Dietary Fats and (book rev), (4)96
tomatoes
ascorbic acid content of, damaged by mechanical harvesting, (7)28
Tomato Production, Processing and Quality Evaluation (book rev), (5)32
toxicants
See **ingredients; toxicology**
toxicology
and regulations of natural colors, (5)40
FDA regulations of natural color, (5)38
Natural Poisons (book rev), (7)84
sulfites as food additives—scientific status summary, (10)117
toxicity of 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid (Trolox C) (antioxidant), (11)50
trace metals
See **metals, trace**
trade
status of world food trade, (8)60
tragacanth
See **gums**
transportation
Current Trends in the Refrigerated Storage and Transport of Perishable Foodstuffs (book rev), (4)96
defining R&D needs as guide for future, (10)76
Trolox C
See **antioxidant(s)**

U

universities
changing roles of research groups, (9)56

V

vanilla
determining authenticity of extracts, (6)54
vegetables
patents, (1)96; (2)81; (3)110; (4)104; (5)200; (6)99; (7)90; (8)113; (9)106; (10)108; (11)107; (12)98
Postharvest Physiology, Handling and Utilization of (book rev), (9)101
Storage, Processing and Nutritional Quality of (book rev), (11)98
See also individual entries
vitamins
Nutrients in Processed Foods. Vol 1, *Vitamins and Minerals* (book rev), (2)75
sulfites as food additive—thiamine intake, (10)119
Vitamin C (book rev), (5)206

W

Washington news notes
(1)61; (2)65; (3)93; (4)77; (5)131; (6)75; (7)65; (8)103; (9)97; (10)111; (11)89; (12)93
water
retention in cooked beef and TP-extended patties, (2)44
water activity
estimation of in IMF, (3)26
wheat
Wheat: Production and Utilization (book rev), (2)76
winemaking
Chemistry of Winemaking (book rev), (8)100
world food supply
government policy and, (8)54
nonagricultural sources of food, (8)64
Nutrition—Proceedings of 9th International congress of, Mexico, 1972 (4 volumes, book rev), (12)88
open-ocean farming of kelp, (12)27
report of IFT Student Division conference on needs, (8)94
status of world food trade, (8)60
symposium, IFT on, (8)54
U.S. role in, (8)56

Y

yeasts
nonagricultural sources of food, (8)64
yogurt
consumer attitude toward, (11)52

Book Review Index

Food Technology, Volume 29, 1975

(Month) page number

Aspects of Meat Inspection. H. Thornton, (6)97

Bergey's Manual of Determinative Bacteriology. R.E. Buchanan & N.E. Gibbons, eds., (4)96

Careers in Industrial Research and Development. J.H. Saunders, (4)98

Cases and Materials on Food and Drug Law. 2nd ed. T.W. Christopher & W.W. Goodrich, (1)90

Catering Science and Technology. M. Pyke, (11)103

Chemistry of Food Packaging. C.M. Swalm, ed., (6)96

Chemistry of Winemaking. A.D. Webb, ed., (8)100

The Chemist's Companion—A Handbook of Practical Data, Techniques and References. A.J. Gordon & R.A. Ford, (10)115

Coffee, Origin and Use. M. Sivetz, (6)96

Commercial Fruit Processing. J.G. Woodroof & B.S. Luh, eds., (11)100

Comparative Studies of Food and Environmental Contamination. FAO/IAEA & WHO, (7)84

Concise Chemical and Technical Dictionary. 3rd ed. H. Bennett, ed., (10)114

Consumer Sourcebook. P. Wasserman & J. Morgan, eds., (1)91

Cooling and Ripening of Fruits in Relation to Quality. International Institute of Refrigeration, (2)76

Current Trends in the Refrigerated Storage and Transport of Perishable Foodstuffs. International Institute of Refrigeration, (4)96

Dietary Fats and Thrombosis. S. Renaud & A. Nordoy, eds., (4)96

Encyclopedia of Associations. 9th ed. Vol. 1. National Organizations of the U.S. Vol. 2. Geographic and Executive Index. Vol. 3. New Associations and Projects. M. Fisk, ed., (10)116

Entwicklungstendenzen in Ernahrung und Diatetik (Future Trends in Nutrition and Dietetics). P. Kopp & K. Trautner, eds., (10)134

Enzymes in Food Processing. 2nd ed. G. Reed, ed., (11)96

Experimental Sensory Psychology. B. Scharf, ed., (11)96

Food Additives to Extend Shelf Life. N.D. Pintauro, (2)76

Food Chemistry. L.W. Aurard & H.E. Wood, (6)96

Food Process Engineering. D.R. Heldman, (10)115

Food Related Enzymes. J.R. Whitaker, ed., (5)37

Food Service Facilities Planning. E.A. Kazarian, (12)88

Food Service Trends. C.E. Eshbach, ed., (1)88

Freeze-Drying of Biological Materials. International Institute of Refrigeration, (1)90

Gewinnung und Berbeitung Von Nahrungsfetten (Recovery and Processing of Food Fats). J. Baltes, (10)135

Guide to Water Cleanup Materials and Methods. A. Samsel, ed., (1)88

Handbook of Chemistry & Physics. 55th ed. R.C. Weast, ed., (3)105

Handbuch Der Käse. Käse Der Welt Von A-Z. Eine Enzyklopädie (Handbook of Cheese. Cheeses of the World from A-Z. An Encyclopedia). H. Mair-Waldburg et al., (4)98

Handbook of Microbiology. Vol. 1. Organismic Microbiology. Vol. 2. Microbial Composition. Vol. 3. Microbial Products. 4. Microbial Metabolism, Genetics and Immunology. A.I. Laskin & H.A. Lechevalier, (2)76

Improvement of Food Quality by Irradiation. FAO/IAEA, (7)83

Instrumentation in the Food and Beverage Industry. Vol. 2. D.S. Harding, ed., (5)32

Introductory Foods. M. Bennion & O. Hughes, (7)83

Introductory Foods: A Laboratory Manual of Food Preparation and Evaluation. 2nd ed. M.L. Morr & T.F. Irmiter, (7)83

Lactic Acid Bacteria in Beverages and Food. J.G. Carr, C.V. Cutting & G.C. Whiting, eds., (11)96

Lebensmittel-Einfluss Der Rheologie (Food Role of Rheology). Monographien Nr. 1505-1536, (4)98

Lehrbuch der Lebensmittel-chemie (Textbook of Food Chemistry). 2nd ed. J. Schormuller, (1)90

Meat Freezing—Why and How? C.L. Cutting, ed., (6)98

The Meat We Eat. J.R. Romans & P.T. Zeigler, (6)98

Metric Measurement of Foods. G. Armbruster, ed., (10)114

Microorganisms in Foods. Vol. 2. Sampling for Microbiological Analysis: Principles and Specific Applications. International Commission on Microbiological Specifications for Foods, (11)98

Mikrobiologie Pflanzlicher Lebensmittel (Microbiology of Plant Foods). G. Muller, (6)103

Modern Problems in Pediatrics. Vol. 14. Nutrition, Growth and Development. C.A. Canosa, ed., (7)86

Molds, Mushrooms, and Mycotoxins. C.M. Christensen, (8)98

Morinda: An Economic Analysis of Malnutrition Among Young Children in Rural India. F.J. Levinson, (5)206

National Patterns of R&D Resources: Funds & Manpower in the United States. 1953–75. U.S. Government Printing Office, (11)98

Natural Poisons. W. Horwitz, ed., (7)84

Nutrients in Processed Foods. Fats, Carbohydrates. P.L. White, D.C. Fletcher & M. Ellis, eds., (8)100

Nutrients in Processed Foods. Proteins. P.L. White & D.C. Fletcher, eds., (8)98

Nutrients in Processed Foods. Vol. 1. Vitamins-Minerals. American Medical Assn., (2)75

Nutrition For the Growing Years. 2nd ed., M. McWilliams, (12)87

Nutrition—Proceedings of the Ninth International Congress of Nutrition Mexico 1972. Vols. 1–4. A. Chavez, H. Bourges & S. Basta, eds., (12)88

Official Methods of Analysis. 12th ed. W. Horwitz, ed., (5)32

Packaging in Perspective. J. Milgram & A. Brody, eds., (2)75

The PAG Compendium—The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956–1973. Vol. A–G. M.Y. Sachs, ed., (7)84

Postharvest Physiology, Handling and Utilization of Tropical and Subtropical Fruits and Vegetables. E.B. Pantastico, ed., (11)101

Proceedings of the International Symposium on Nitrite in Meat Products. B. Krol & B.J. Tinbergen, eds., (1)88

Quantity Food Purchasing. 2nd ed. L.H. Kotschevar, (12)90

Sensory Evaluation of Appearance of Materials. American Society for Testing & Materials, (3)105

Storage of Cereal Grains and Their Products. 2nd ed. C.M. Christensen, ed., (4)94

Storage, Processing, and Nutritional Quality of Fruits and Vegetables. D.K. Salunkhe, ed., (11)98

The Sugar Cane. 2nd ed. A.C. Barnes, (5)32

Sugar Chemistry. R.S. Shallenberger & G.G. Birch, (10)114

Sugars in Human Nutrition. H.L. Sipple & K.W. McNutt, eds., (9)100

Sugar and Sugar Replacements. British Food Mfg. Industries Assn., (9)100

Technology of Fruit Juice Concentrates—Chemical Composition of Fruit Juices. International Federation of Fruit Juice Producers, (3)105

Textbook of Meat Hygiene. 6th ed. H. Thornton & J.F. Gracey, (6)96

This is Liquid Sugar (and Supplement). 2nd ed. P.X. Hoynak & G.M. Bollenback, (4)94

Tomato Production Processing and Quality Evaluation. W. Gould, (5)32

Vitamin C. G.G. Birch & K. Parker, eds., (5)206

Wheat: Production and Utilization. G.E. Inglett, ed., (2)76

Why Your Child Is Hyperactive. B.F. Feingold, (7)85

The World Food Programme in Action, Asia and the Far East. UN/FAO (12)91

World Review of Nutrition and Dietetics. Vol. 20. G.H. Bourne, ed., (8)98

World Review of Nutrition and Dietetics. Vol. 21. G.H. Bourne, ed., (12)87

BOOK REVIEWERS 1975

W.G. Allen
L.E. Barbrow
C.E. Bodwell
B. Borenstein
J.A. Bowers
R.G. Cassens
T.W. Downes
J.W. Erdman
L.J. Ernst
J.B. Fox Jr.
F.J. Francis
W.D. Gray
N.F. Haard
P.V.J. Hegarty
L.F. Hermann
J.L. Hickson
H.O. Hultin
W.H. Kampen
B. Klein
M. Kroger
F.A. Kummerow
P.A. Lachance
G.A. LeVeille
G.E. Livingston
H.R. Moskowitz
P.E. Nelson
Z.J. Ordal
V.W. Padhye
H.M. Pancoast
E.G. Perkins
Y. Pomeranz
J.F. Price
M.A. Rao
L.B. Rockland
T.A. Rozsa
D.K. Salunkhe
B.S. Schweigert
W.A. Sistrunk
R.W. Sternberg
V.E. Sweat
M.E. Thorner
V.A. Toscano
L.A. Underkofler
E.W. Underriner
W.M. Urbain
H.M. Wallenstein
A.E. Wasserman
J.R. Wilson
L.D. Witter
B.L. Zoumas